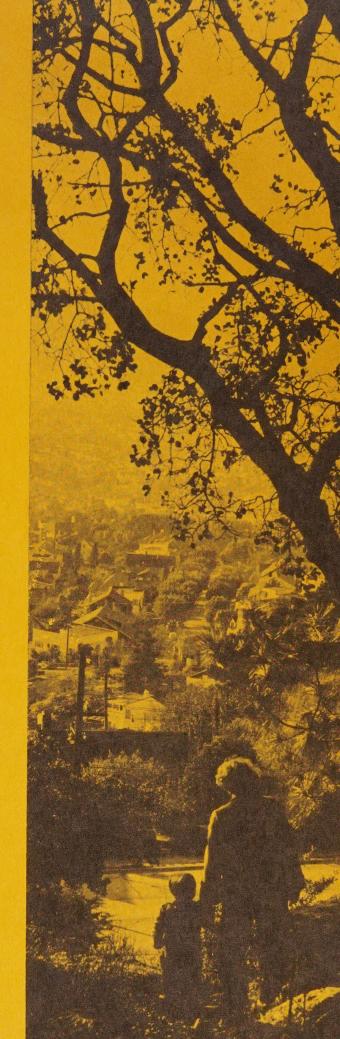
CIRCULATION SECTION OF THE BERKELEY MASTER PLAN

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OF THE BERKELEY MASTER PLAN*

Circulation Objectives

Planning for circulation in Berkeley is designed to retain the character and amenity of the City while making reasonable provisions for and encouraging new methods for moving people and goods. Consistent with the overall objectives of the Master Plan, circulation objectives are:

- 1. To maintain, design and develop circulation facilities—including transit—as public places so as to (a) provide an attractive appearance for both users and abutting land; (b) provide opportunities for dual use of space for social activities and recreation; (c) insure safety, convenience and amenity for pedestrians; (d) preserve and enhance the natural beauty and existing character of the areas involved.
- 2. To reduce the dependence on the private automobile as the dominant mode of transportation by developing a fully integrated system of pedestrian, bicycle, local transit, regional transit, and automobile facilities and by initiating innovative circulation experiments throughout Berkeley and the region.

3. To encourage:

- (a) The continued improvement and intensification of the Berkeley Central Business District, and
- (b) The development of suitable concentrated shopping centers.
- 4. To integrate Berkeley's regional circulation elements with those of other cities and counties in the Bay Area to provide access to all areas within Berkeley and the region by a coordinated system of trafficways and transit.
- 5. To preserve trees and other amenities adjacent to existing roadways through use of all possible techniques to improve circulation without resorting to street widening.

Assumptions and Principles

Circulation principles and planning have been based on a number of specific assumptions supplementing those set forth earlier in the Master Plan. The prime assumption is that appropriate means can be found to limit the population of Berkeley to maintain that balance of intensity of land use and circulation upon which the liveability of the City depends.

^{*} This section is referenced to and based on "Report on Proposed Amendment to the Circulation Section of the Berkeley Master Plan" prepared by the Transit-Trafficways Committee, October 30, 1967.

The most reasonable method of attaining the established objective of reducing the dependence on the private automobile is through provision of public transportation which can compete with the automobile in economy, convenience and comfort. It is assumed that the City of Berkeley can mobilize the technological innovation, political initiative, user education and public acceptance required to encourage such an improved transit system. With such an improvement it is assumed that car ownership ratio can be maintained at a level of about one car for each two residents and that the use per vehicle will not undergo a major increase.

While transit will meet certain needs, no alternative to the automobile in terms of flexibility, convenience and comfort is available in the foreseeable future. There will be a continued reliance on the private automobile for personal travel, especially recreation oriented trips, but these will be spread more evenly through the day and week.

Principles to guide circulation planning are established as follows:

- 1. Berkeley will use every available opportunity to decrease dependence upon the private automobile for circulation and encourage innovative experiments toward this end.
- 2. Major routes are to be located around rather than through residential neighborhoods, commercial centers, industrial areas, and the University of California. Where through routes must cross such areas, routing and design should minimize disruption of the area.
 - In commercial and high density residential areas dispersion to several streets may be necessary where traffic volumes are significant. In lower density residential areas emphasis is on concentrating traffic on a minimum number of streets.
- 3. Street widenings are to be avoided wherever possible, and should be used only when (a) all other feasible means--such as parking restrictions, turning controls, traffic devices, etc.--have proved inadequate, (b) congestion is a clear threat to safety and amenity, and (c) no alternative route or means of transportation is available.
- 4. When regional traffic cannot be handled on separate facilities (such as rapid transit and freeways), it should be accommodated on and restricted to a limited number of City streets.
- 5. Capital improvements are to be designed to preserve existing planting to the fullest extent possible and tree planting and landscaping provided for wherever appropriate.

Elements of the System

The circulation system of Berkeley includes, but is not limited to, all the elements shown on the Circulation Plan; the system includes:

- Transit including (a) a local transit system to provide for movement within Berkeley and (b) a regional mass rapid transit service to carry people to and from San Francisco, Oakland, Richmond and other key points in the Bay Area.
- Freeways which provide a high volume facility for through traffic, with limited access and grade-separated intersections (but requiring large amounts of right-of-way). (Note that no additional free-ways are proposed in this Circulation Section of the Berkeley Master Plan.)
- Major Streets serving large volumes of traffic and interconnecting major districts of the City and adjoining cities.
- Collector Streets serving sub-districts and neighborhoods of the City by providing access to Major Streets.
- Scenic Routes consist of streets (Major or Collector) designated for special attention in the protection and enhancement of scenic values.
- Other Regional Transportation include such elements as Railroads and Heliports to provide connections with or serve the needs of the region and beyond the region.

Transit

The problems of total reliance on private cars--including air pollution, noise, excessive land acquisition requirements, and unremitting congestion--are increasingly apparent. The decision of San Francisco, Alameda and Contra Costa Counties to build a new rapid transit system was a step toward more rational ways to meet the circulation needs of a large and growing metropolitan region. Berkeley's decision to underground the line through the City is a positive step toward retaining the present quality of the City, while increasing its ability to handle regional traffic. The Bay Area Rapid Transit System will be the primary regional transit facility.

Three regional stations are located in Berkeley: (1) the "Ashby Station" located at Adeline Street and Ashby Avenue serving South Berkeley, (2) the "Berkeley Station" located at Shattuck Avenue and Center Street serving the heart of the Central Business District and the University of California Campus, and (3) the "North Berkeley Station" located at Sacramento Street and Delaware Street serving North Berkeley. The "College Avenue Station" located at Shafter Avenue and College Avenue in Oakland will serve portions of southeast Berkeley and the University of California Campus. Rapid transit will provide fast--downtown Berkeley to downtown San Francisco will require nine minutes -- comfortable and convenient service. It provides a significant reduction in the need for additional freeway construction especially in the high density metropolitan core. The Central Business District location will, and is encouraged to, stimulate development of office buildings, of commercial establishments, and of apartment buildings in downtown Berkeley because of the convenience of service to all parts of the Bay Area.



Transit planning must include local transit as well as regional rapid transit. In addition to the need for transit routes within Berkeley and to adjacent communities there is need for feeder service to BART for those who work, live, shop or visit locations not adjacent to BART stations.

Since 1960, the Alameda-Contra Costa Transit District (A.C.) has operated local and inter-city transit for the East Bay with connections to San Francisco. Improvements to service have been made and patronage increased. Berkeley can work with or go beyond this service to meet its needs. Of importance are: routing, scheduling, maintenance, and comfort of vehicles to make travel pleasant and convenient.

Continuing studies toward an improved and more convenient local transit system should include:

- . Coordination of routes, schedules and fares between rail transit and conventional surface transit to assure service to areas remote from the stations.
- . Scheduling and routing service and providing adequate facilities to minimize waiting and transfers.
- . Design of stations and streets immediately surrounding the stations to assure convenient and pleasant parking and loading service for riders.
- . Programs to educate and encourage the public to make use of the improved local and regional transit.
- Investigation of a number of possible innovations to provide increased amenity, convenience and comfort including: (a) operating local transit on a free basis to encourage patronage; (b) using mini-buses or other small vehicles in low density or special service areas; (c) developing distinctive transit services that are unique to Berkeley--as cable cars are unique to San Francisco; (d) developing a wide variety of coordinating services, including moving sidewalks, jitneys, car-pools, etc., as well as mini-busses.

This program will require a joint effort by Berkeley, BART, other East Bay communities, A.C. Transit, Greyhound and University bus service to develop a total system that is pleasant, economical and convenient to use; it should proceed without delay.

Freeways

No new freeways are proposed in this plan although an east-west freeway through South Berkeley and a second shoreline freeway are in the State freeway plans. Berkeley, however, is assuming that the Grove-Shafter Freeway and rapid transit will reduce the pressures (especially during the peak hours) sufficiently to make additional east-west facilities



such as a freeway connecting Warren Boulevard and the Eastshore Freeway unnecessary and not subject to further consideration. A second shoreline freeway is shown on the Circulation Plan "under consideration." With the Eastshore Freeway at or near capacity, a second shoreline freeway may be needed to serve economic growth which is creating additional truck traffic and jobs along the East Bay and residential growth at the northern and southern ends of the corridor. The plan will be re-evaluated when more definitive information is available from the Bay Area Transportation Study, and with recognition of plans and policies of the Bay Conservation and Development Commission.

Major Streets and Collector Streets

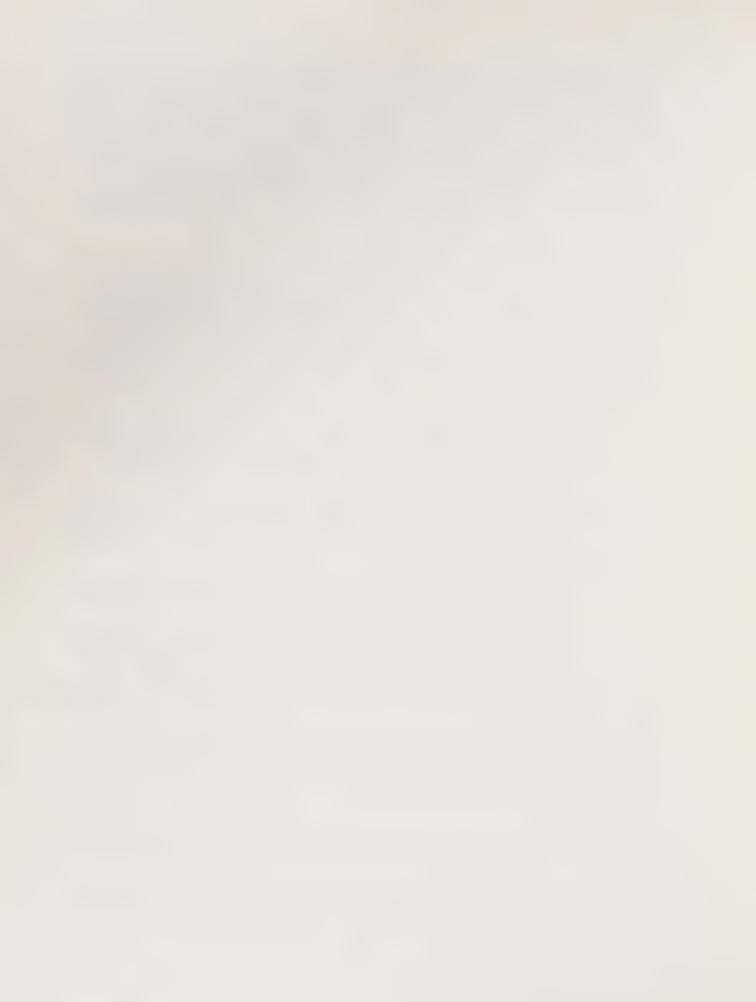
Streets serve a variety of needs: movement of pedestrians, bicycles, motorscooters, cars and trucks; property access; public open spaces; parking; and transit. To handle these needs, the plan designates major and collector streets with the remainder being local streets. Major streets will serve regional traffic and the largest local traffic generators—the University, Central Business District, and transit stations. Collector streets will serve lesser traffic generators, supplement and provide access to residential neighborhoods.

- . On major streets priority is given to the movement of traffic over needs for parking and turning. Limitations on parking and turning should be used in preference to street widening in facilitating traffic flows on major and collector streets.
- . On collector streets, the needs of through traffic, turning and parking are belanced to provide for each. In particular instances and at certain times (such as rush hour), one function may take precedence over others.
- . On local streets, ease of access, pedestrian movement, neighborhood amenity, and parking have priority over traffic movement.
- One-way pairs are appropriate only in high intensity areas such as the Central Business District and the high density residential area south of the University of California campus. They are not appropriate for lower density residential areas where they spread high speed traffic and large volumes of traffic over large areas.

Rigid design standards are not established in that sensitivity to the most suitable street development in terms of function, abutting land use, topography, and the preservation of existing character and of esthetic features should always be recognized.

The designated Major streets and Collector streets are shown on the Circulation Plan Map and are briefly summarized in the following paragraphs for each of the major areas of the City.

The Northeast area of the City is predominantly low density residential in use with rugged terrain. The streets generally follow this terrain and are often narrow with many curves. The volumes of traffic are not



large. A number of collector streets are designated which connect to major streets serving the University, Central Business District, Albany and the Eastshore Freeway.

The Northwest area is more gently sloping and is characterized by: (a) a grid and radial street pattern; (b) the transit station at Delaware Street and Sacramento Street; (c) industrial uses and the freeway along its western edge; and (d) extensive strip commercial along San Pablo and University.

Sixth, Gilman and the Eastshore Highway are planned to serve the local industrial traffic. Gilman, University and Sacramento will provide major access to the transit station with Hearst-Delaware and Cedar providing secondary access. San Pablo will continue to provide neighborhood shopping and auto-oriented shopping, but will be improved in capacity and appearance to define more clearly its role as the major north-south route through the Berkeley portion of the East Bay Corridor. Hopkins and Monterey serve the moderate amounts of traffic to and from the north hills.

The <u>Southwest area</u> is similar to the northwest portion of the City and is served by the same major north-south routes (San Pablo, Sixth, Frontage, Sacramento and Grove). Its east-west traffic, however, is greater with the Central Business District, University and South Campus areas directly east. In addition, Ashby Avenue which links the East-shore Freeway with eastern Contra Costa County passes through this area. To meet the east-west traffic needs, Dwight is planned as a major street east-west traffic needs. Dwight is planned as a major street east of Sixth Street and Alcatraz as a collector street east of San Pablo.

The <u>Southeast</u> area is characterized by: (a) variations in terrain from sloping to quite rugged with the grid street system yielding to a more curvilinear pattern in the rugged hill areas at the eastern edge of the City; (b) older residential areas and areas of mixed use along the major routes; (c) east-west through traffic along Ashby Avenue and heavy north-south traffic to and from the University and Central Business District, and (d) the transit station at Ashby and Adeline.

These demands produce traffic in this area far out of proportion to its population or commercial activity. To protect its residential character, traffic must be confined to a small number of streets with dead-ending or other means used to prevent through traffic from intruding on the residential streets. College Avenue, Telegraph Avenue and Shattuck Avenue are planned to serve the University and Central Business District. A secondary route is the Derby-Warring connection to the north campus and Radiation Laboratory. In addition to Ashby Avenue which will take on more locally generated traffic to serve the transit station, Claremont and Alcatraz and a small segment of Woolsey will serve to supplement access to the transit station.

The Central Business District is characterized by a concentration of cars and pedestrians in a relatively small area. With the University on the east and Berkeley High School on the west, alternative routes are limited. The transit station will increase pedestrian activity and increase the use of downtown for retail and office uses.

To handle these multiple demands major routes are planned around the central core. Grove Street, University Avenue and Hearst, Fulton-Oxford, and the Dwight-Haste pair are planned as major streets around the periphery. Shattuck is not planned to serve cross-town traffic but to provide access to and from the Central Business District and Berkeley station; study will be given to eventual limiting this direct route through the Central Business District. To supplement the major routes, the Bancroft-Durant pair, and Hearst are planned as collector streets.

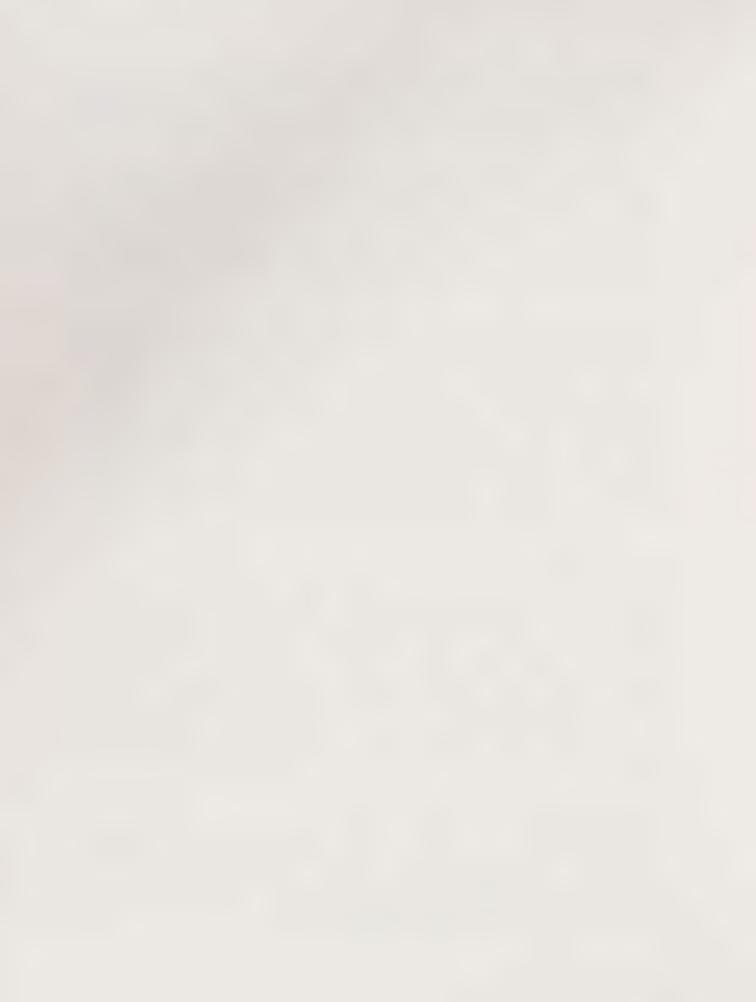
The University Campus and South Campus area is characterized by: (a) high density residential housing in dormitories, apartments, rooming houses and group living quarters; (b) a large commercial center along Telegraph and Bancroft; (c) large number of pedestrians and automobiles coming to and from the University. This combination creates intense activity in the area. The plan calls for providing major routes along the periphery with Hearst Avenue, College Avenue, the Dwight-Haste pair and Fulton. Secondary routes to serve the interior are the Bancroft-Durant pair and Gayley Road. This will be sufficient if plans are also undertaken to reduce the auto traffic in the area by increased transit use (local and regional) by students, staff and shoppers. Within the area, the high pedestrian volumes make it clear that pedestrians should be given equal status—in some areas preferential status—on the public rights—of—way.

Scenic Routes

The Circulation Plan map indicates those Major and Collector streets which are also designated Scenic Routes. Those routes relate to the Scenic Route Element of the Alameda County Master Plan originally adopted in the spring of 1966; Berkeley was active in the development of this County plan. The County plan defines scenic routes as "those that traverse, or those that provide the most efficient routes to or between areas of major scenic, recreational and cultural attractions." In addition to supplementary street tree planting and landscaping, a special effort is indicated along these routes to (1) conserve, enhance, and protect scenic views observable from the routes, and (2) provide, where possible, multiple recreational uses, roadside tests, and observation points.

Neighborhood Streets and Pedestrianways

Streets other than those shown on the Circulation Plan Map are designated Neighborhood and/or Local streets. The multi-purpose of these streets including: (a) access to abutting property; (b) light and air to abutting property; (c) local parking; (d) pedestrian routes and (e) recreation uses is fully recognized. Use of these streets by other traffic is not compatible with the prime uses and should be discouraged.



Reduction of the unnecessary use of local streets can be accomplished by a number of possible techniques including traffic control signs and devices, street diverters, cul-de-sacs, loop streets, and appropriate landscaping. These elements are developed--where appropriate--as part of the individual Neighborhood Plans for each sub-area of the City of Berkeley.

Within the framework of Neighborhood Planning full advantage is to be taken of available public right-of-way to add liveability and amenity, including:

- Maintenance of public right-of-way in such a way as to set a high standard for the City and region; cleanliness and safety are basic to their use and amenity.
- Public open spaces are to be incorporated into street plans by the provision of: (a) tot lots and small parks where streets are dead-end or closed off; (b) small plazas for informal resting and visiting in the areas of large pedestrian traffic, such as South Campus and the Central Business District; (c) linear parks integrated with sidewalks.
- . Landscaping, paving, sidewalks and street furniture are to be developed in a manner appropriate to the street's automobile and pedestrian use, topography and neighboring land uses.
- . Viewpoints and small parks are to be established along major and collector streets to preserve unique locations for public enjoyment.

Appropriate planning for pedestrian movement is essential to the attractiveness and liveability of residential neighborhoods and to the access of commercial centers. Pedestrian ways are an integral part of the local circulation system. The safety, amenity and convenience of pedestrians merit equal concern with those of transit riders and motorists. Improvements and incentives developed for pedestrian movement will also help to reduce use of the private automobile. Planning for pedestrian movement and access will include:

- . Provision for safe, frequent and convenient access across all major streets.
- . Encouragement of cooperative development by merchants of an extensive home parcel delivery system to increase use of transit and pedestrian shopping.
- . Design and installation of street furniture to serve pedestrian needs (benches, drinking fountains, etc.) and improve the amenity of sidewalks.
- Development of special programs around elementary schools and parks to insure ease and safety for children using these facilities.



Railroads

The Southern Pacific rail line provides passenger service but is used primarily for industrial development of West Berkeley and continues, with the Eastshore Freeway, to sustain its economic health. A second rail line, the Santa Fe running north and south through Berkeley between San Pablo Avenue and Sacramento Street, is obsolete and should be abandoned.

Heliport

The heliport on the Berkeley waterfront provides regional service to Marin County, Contra Costa County, San Jose, downtown Oakland and downtown San Francisco. Its major function, at present, is to provide direct connections to San Francisco and Oakland International Airports which serve the nation and the world. SFO Helicopter Airlines has already expanded from 10 to 26 passenger vehicles and plans in the future to use 50 passenger helicopters or more. The Circulation Plan Map shows provision for an improved heliport facility.



